

TSMC-03-461



April 16, 2004

To: Commissioner for Patents
P.O.Box 1450
Alexandria, VA 22313-1450

Fr: George O. Saile, Reg. No. 19,572
28 Davis Avenue
Poughkeepsie, N.Y. 12603

Subject: | Serial No. 10/780,512 02/17/04 |
Tai-Chun Huang et al.
NON-REPEATED AND NON-UNIFORM
WIDTH SEAL RING
| _____ |

INFORMATION DISCLOSURE STATEMENT

Enclosed is Form PTO-1449, Information Disclosure Citation
In An Application.

The following Patents and/or Publications are submitted to
comply with the duty of disclosure under CFR 1.97-1.99 and
37 CFR 1.56.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being
deposited with the United States Postal Service as first class
mail in an envelope addressed to: Commissioner for Patents,
P.O. Box 1450, Alexandria, VA 22313-1450, on April 26, 2004.

Stephen B. Ackerman, Reg.# 37761

Signature/Date Stephen B. Ackerman 4/26/04

Co-pending U.S. Patent Application Serial No. 09/989,837, filed on 11/20/01, and assigned to the same assignees as the present invention, "RF Seal Ring Structure," describes a seal ring having alternating widths along its length.

The following two U.S. Patents teach the use of plugs in a seal ring to prevent cracking:

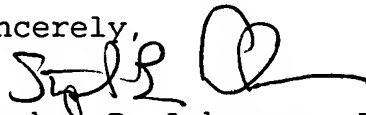
- 1) U.S. Patent 6,300,223 to Chang et al., "Method of Forming Die Seal Structures Having Substrate Trenches."
- 2) U.S. Patent 5,831,330 to Chang, "Die Seal Structure for a Semiconductor Integrated Circuit."

U.S. Patent 5,834,829 to Dinkel et al., "Energy Relieving Crack Stop," describes a redundant seal ring structure.

U.S. Patent 6,028,347 to Sauber et al., "Semiconductor Structures and Packaging Methods," discusses trenches formed outside the seal ring at the corners.

U.S. Patent Application Publication US 2001/0030358 A1 to Okada et al., "Semiconductor Device Package," teaches a method of seam welding of the seal ring at the corners to prevent cracking.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen B. Ackerman", with a large, stylized "Q" or "2" at the end.

Stephen B. Ackerman, Reg. #37761

